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REMARKS

The present Response After Final Pursuant to 37 CFR 1.116 is submitted in reply to the Final Official Action of February 28, 2008. The Applicant respectfully requests entry of the present Response After Final into the record of the case before reconsideration of the present and allowance of the present Application in view of the above amendments and following arguments.

Claims 42, 49-56 and 63-63 are presently pending in the Application and claims 63-66 are allowed, for which the Applicant respectfully thanks the Examiner.

Claims 42, 49-56 and 67-68 are rejected in view of the cited prior art, namely:

claim 52 is rejected, under 35 U.S.C. 102, over Lee '639,

claims 42, 49 and 51 are rejected, under 35 U.S.C. 103, over Lee '639,

claim 50 is rejected, under 35 U.S.C. 103, over Lee '639 in further view of Waggoner '981 and, under 35 U.S.C. 103, over Lee '639 in further view of Willemsen '889,

claims 53, 56, 67 and 68 are rejected, under 35 U.S.C. 103, over Christian et al. '791 in view of Winston et al. '354, and

claim 54 is rejected, under 35 U.S.C. 103, over Christian et al. '791 in view of Winston et al. '354 and in further view of Hung '625.

The Applicant reviewed the cited prior art, the Examiner's interpretations of the cited prior and the present claims and respectfully disagrees with and traverses the stated grounds for rejections in view of the above claim amendments and following reasons.

Before considering the present invention as recited in rejected independent claims 42, 52 and 67, it will first be noted that the Applicant, upon consideration of the Examiner's interpretations of the cited prior art, amended the claims to more explicitly and clearly recite the patentable distinctions between the invention, as recited in the independent claims, and the Examiner's interpretations of the cited prior art. It will be readily seen that the claim amendments presented herein above are fully supported by the specification, the drawings and the claims, as originally filed, so that the submitted amendments do not add any new subject matter to the invention, the specification and the drawings or the claims.

Turning now to the invention as recited in claim 42 as amended herein above, this claim is directed to a device for raising or cultivating cells in a container-like receptacle 1. The device includes a cylindrical middle part that is closed off at a top end by an upper lid 3 and at a bottom

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end by a lower lid 12 which forms a base of the receptacle 1 wherein the upper lid 3 and the lower lid 12 are connected to the middle part in a pressure-tight manner and the upper lid 3 and the lower lid 12 are each provided with at least one inlet bore 8 for one of an introduction and a withdrawal of culture medium and oxygen. As recited in amended claim 42, the upper and lower lids 3, 12 are connected to the middle part by mating internal and external threaded connections 2, 4 wherein each threaded connection is provided with at least one sealing ring and wherein the upper lid 3 and the lower lid 12 are each provided with an extension ring 14 having an extension ring region extending beyond the threaded connections 2, 4 to at least partially enclose the cylindrical middle part. At least one sealing ring is located between the middle part and the extension ring region extending beyond the threaded connections 2, 4 to seal additionally the middle part from an outside.

The primary reference applied by the Examiner, in rejecting claim 42 under 35 U.S.C. 102 and 35 U.S.C. 103, is Lee '639. It will be noted that the amendments to claim 42 incorporate the recitations and limitations of claims 48, 49 and 50 into claim 42, so that the prior art cited in the rejection of claims 48, 49 and 50, and in particular Willemssen '889, will be considered with respect to amended claim 42. Further, as claim 50 is canceled, to reduce the number of issues under consideration and thereby expedite prosecution and allowance of the present Application, it is respectfully submitted that Waggoner '981 is no longer relevant to the claims of the present Application.

First considering Lee '639, this reference relates to a tissue culture device comprising a horizontally disposed cylindrical chamber having an input port and output port located in the wall of the cylinder and towards the ends thereof and two end caps that screw onto the cylindrical chamber body with a frame extending between the end caps and pivoted on the end caps for rotatably supporting disks on which the cells are grown. It is therefore apparent that there are a number of fundamental distinctions between the present invention, as recited in amended claim 42, and Lee '639.

For example, the Examiner states with respect to the rejection of claim 42, under 35 U.S.C. 102, that Lee '639 teaches the use of a lateral tensioning ring 29 to encircle the receptacle and the upper lid to retain the upper lid in sealing engagement with the receptacle when the receptacle is rotated about the transverse axis. The Applicant must point out, however, that the element referred to by the Examiner comprises a ring to retain the top lid on

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the receptacle, that is, ring 29 is a ring seal for sealing the joint between an end cap 12, 13 of the chamber and the cylindrical body 11 of the chamber and has no role in retaining a lid or end cap on the cylindrical body of the chamber. It is respectfully submitted that the element cited by the Examiner thereby has no structural or functional relationship or correspondence with the retaining ring of the present invention under the requirements and provisions of 35 U.S.C. 102.

Next, it is noted that in the same statement the Examiner implies that the Lee '639 device is rotated about a transverse axis in the same manner as the device of claim 42, hence the need for and interpretation of the above discussed sealing ring being a retaining ring which is, it is respectfully submitted, a complete and fundamental misreading of the structure, purpose and function of the sealing ring 29 of Lee '639. It must be noted, however, in further fundamental distinction between the present invention, as recited in claims, and the teachings of Lee '639 under the requirements and provisions of both 35 U.S.C. 102 and 35 U.S.C. 103, that according to the present invention the entire chamber is rotated about a transverse axis while in the Lee '639 device it is only the internal disk frame that is rotated.

In still further fundamental distinction between claim 42 and Lee '639, the ports or bores in the Lee '639 device are located in the cylindrical side wall of the chamber 11 while, according to the invention as recited in claim 42, the ports or bores 8, 9 are located in the top and the bottom lids of the chamber, which is a fundamental distinction between the present invention, as recited in claim 42, and the teachings of Lee '639 under the requirements and provisions of both 35 U.S.C. 102 and 35 U.S.C. 103.

The Applicant notes with respect to the rejection of claim 42, under 35 U.S.C. 103, that the Examiner states that Lee '639 effectively teaches a chamber having bores or ports in the upper and lower lids ends of the chamber because it would be obvious to move the ports or bores from the cylindrical side wall of the chamber to the upper and lower lids of the chamber.

The Applicant respectfully disagrees with the Examiner assertion. As described above, the device of the present invention as recited in claim 42 includes a chamber receptacle closed by a top lid and a bottom lid wherein the chamber or receptacle is rotatable about an axis extending between the top and bottom lids during cell growth. It is desirable and necessary to provide a flow of media through the chamber during cell growth, which requires the bores or ports 8, 9 to be located in the lids so allow the chamber or receptacle to rotate about and relative to the fluid connections to the ports or bores 8, 9. According to the Lee '639 device,

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however, the two end caps rotationally support a frame that extends between the end caps and supports disks on which the cells are grown and the frame and disks mounted thereon are rotated, rather than the chamber, which requires that the frame be concentrically mounted onto the lids in order to be able to rotate the frame in the chamber. This, in turn, requires that the ports or bores of the Lee '639 be located on the cylindrical side wall of the chamber rather than on the lids because locating the ports or bores on the lids would interfere with having a rotational frame mounted on the lids.

It is therefore apparent that the ports or bores of the Lee '639 device cannot be re-located to the lids, that it would not be obvious to re-located the ports or bores to the lids, and that Lee '639 thereby does not teach or support a teaching or implication or conclusion of locating the ports or bores on the end lids of the device, so that Lee '639 does not teach or suggest the use of ports or bores located on the lids under the requirements or provisions of either 35 U.S.C. 102 and/or 35 U.S.C. 103.

It is therefore the Applicant's belief and position that, for the above discussed reasons, Lee '639 does not teach, suggest, disclose or hint at the present invention, as recited in claim 42, under the requirements and provisions of 35 U.S.C. 102 and/or 35 U.S.C. 103 and the Applicant respectfully requests that the Examiner reconsider and withdraw the rejections of claim 42, and allow claim 42 as presented herein above.

Next, claim 42 is rejected in view of Lee '639 and Willemsen '889 as teaching the use of an extension right in conjunction with a threaded connection between the chamber and an end cap or lid of the device, and the Applicant respectfully disagrees with the Examiner in light of the above amendment to claim 42 which clarify the meaning of the recitations pertaining to the extensions rings.

As recited in claim 42 as amended herein above, each threaded connection between a lid and the cylindrical chamber is provided with an extension ring 14 having an extension ring region extending beyond the threaded connections 2, 4 to at least partially enclose the cylindrical middle part and wherein there is at least one sealing ring located between the middle part of the device, that is, the chamber, and the extension ring region that extends beyond the threaded connections 2, 4 to thereby additionally seal the middle part.

A review of Lee '639 and Willemsen '889 will show that while each reference shows the use of a threaded connection between a cap or lid and a container or chamber, none of the

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threaded connections includes any form of an extension ring region extending beyond the threaded connections to at least partially enclose the container or chamber and neither reference shows the use of one or more sealing rings located between the container or chamber and the extension ring region to thereby additional seal.

It is therefore the Applicant's belief and position that, for the above discussed reasons, neither Lee '639 nor Willemssen '889, nor any permissible combination thereof, in any way teaches, suggests, discloses or hints at the present invention as recited in claim 42 under the requirements and provisions of 35 U.S.C. 102 and/or 35 U.S.C. 103, and the Applicant respectfully requests that the Examiner reconsider and withdraw the rejections of claim 42 and the allow claim 42 as presented herein above.

Turning now to claim 52 which is rejected in view of Lee '639. This claim is directed to a device for raising or cultivating cells in a container-like receptacle 1 which includes a base and at least an upper lid 3 wherein the upper lid 3 is connected to the receptacle 1 in a pressure-tight manner, and the receptacle 1 or the upper lid 3 is provided with at least one inlet bore 8 for the introduction or withdrawal of culture medium and oxygen. As recited in claim 52, the device further includes at least one resilient lateral tensioning ring 15 that encircles at least the receptacle 1 and the upper lid 3 to retain the upper lid 3 in sealing engagement with the receptacle 1 when the receptacle 1 is rotated about a transverse axis.

As discussed above, the Examiner states with respect to the rejection of claim 52 that Lee '639 teaches the use of a lateral tensioning ring 29 to encircle the receptacle and the upper lid to retain the upper lid in sealing engagement with the receptacle when the receptacle is rotated about the transverse axis. The Applicant respectfully disagrees with the Examiner's interpretation of Lee '639 because the element referred to by the Examiner comprises a ring to retain the top lid on the receptacle, that is, ring 29 is, in fact, actually a ring seal for sealing the joint between an end cap of the chamber and the cylindrical body of the chamber and has no role in retaining a lid or end cap on the cylindrical body of the chamber—this ring does not encircle an exterior surface of both the receptacle 1 and the upper lid 3. The element cited by the Examiner thereby has no structural or functional relationship or correspondence with the retaining ring of the present invention, under the requirements and provisions of 35 U.S.C. 102 and/or 103.

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It is therefore the Applicant's belief and position that Lee '639 does not teach, suggest, disclose or hint at the present invention, as recited in claim 52, under the requirements and provisions of 35 U.S.C. 102 and/or 35 U.S.C. 103. The Applicant therefore respectfully requests that the Examiner reconsider and withdraw all rejections of claim 52, and allow claim 52 as presented herein above.

Next considering claim 67 as well as dependent claim 68, both claims are rejected, under 35 U.S.C. 103, over Christian et al. '791 in view of Winston et al. '354. In order to more clearly overcome the raised rejection, claim 67 as amended herein above to more explicitly and clearly recite the fundamental distinctions between the invention and the prior art. In particular, claim 67 is directed to a device for raising or cultivating cells in a container-like receptacle that includes a base and at least one lid wherein the lid is connected to the receptacle in a pressure-tight manner and the receptacle or the lid is provided with at least one inlet bore for one of the introduction and withdrawal of culture medium and oxygen. As also recited in claim 67, the receptacle 1 is provided with a pressurizing means that is located within the receptacle 1 for exerting pressure internally on the cells 7.

Christian et al. '791 teaches only a receptacle having a single, upper lid and thereby, in complete contrast from the invention as recited in claim 67, does not teach, suggest, disclose or hint at a receptacle having upper and lower lids or ends and does not teach, suggest, disclose or hint at a receptacle having input and output bores in the upper and lower lids or ends, as presently claimed.

In addition, and as expressly conceded by the Examiner, Christian et al. '791 does not teach, suggest, disclose or hint at any form of means to provide pressure in the cell growth receptacle, much less any form of pressure apparatus located within the cell growth receptacle.

It is therefore apparent, and the Applicant's belief and position, that Christian et al. '791 does not teach, suggest, disclose or hint at any aspect or element of the present invention as recited in claim 67 to those of ordinary skill in the relevant arts under the requirements and provisions of 35 U.S.C. 102 and/or 35 U.S.C. 103.

The Examiner instead relies on Winston et al. '354--and previously on Hung '625--for the teaching of an apparatus and means for providing pressure in the cell growth receptacle or chamber. Winston et al. '354, however, teaches a cell growth chamber having a reservoir that is separate from the cell growth chamber and that is provided with flexible walls and that is

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connectable to an exterior pressure source. The cell growth chamber can be pressurized by the application of pressure to the reservoir by an external pressure source which, in turn, expands the wall of the reservoir to impose pressure in the growth chamber. It is respectfully submitted that Winston et al. '354, therefore, does not teach, suggest, disclose or even hint at any form of pressurization means located within the cell growth chamber.

Hung '625 is similar to Winston et al. '354 in having an external pressure source, but in this case the external pressure source communicates directly with the cell growth chamber rather than indirectly through a flexibly walled reservoir chamber. Hung '625, therefore, like Winston et al. '354, does not teach, suggest, disclose or even hint at any form of pressurization means located within the cell growth chamber.

It is therefore apparent that neither Christian et al. '791, nor Winston et al. '354 nor Hung '625, nor any permissible combination thereof, in any way teach, suggest, disclose or hint at cell growth chamber having a pressurizing means that is located within the receptacle for exerting pressure internally on the cells under the requirements and provisions of 35 U.S.C. 103. The Applicant accordingly respectfully requests that the Examiner reconsider and withdraw all rejections of claim 67 and dependent claim 68, and allow those claims as presented herein above.

Lastly, claims 53, 54 and 56 are dependent from claim 67 and thereby incorporate all recitations and limitations of claim 67 and are thereby patentably distinguished over and from the cited prior art for at least the same reasons that claim 67 is patentably distinguished over and from the cited prior art. The Applicant therefore respectfully requests that the Examiner reconsider and withdraw all rejections of claims 53, 54 and 56, and allowance of claims 53, 54 and 56 as presented herein.

In view of the above amendments and remarks, it is respectfully submitted that all of the raised rejection(s) should be withdrawn at this time. If the Examiner disagrees with the Applicant's view concerning the withdrawal of the outstanding rejection(s) or applicability of the Lee '639, Waggoner '981, Willemsen '889, Winston et al. '354, Christian et al. '791 and/or Hung '625 references, the Applicant respectfully requests the Examiner to indicate the specific passage or passages, or the drawing or drawings, which contain the necessary teaching, suggestion and/or disclosure required by case law. As such teaching, suggestion and/or disclosure is not present in the applied references, the raised rejection should be withdrawn at

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this time. Alternatively, if the Examiner is relying on his/her expertise in this field, the Applicant respectfully requests the Examiner to enter an affidavit substantiating the Examiner's position so that suitable contradictory evidence can be entered in this case by the Applicant.

In view of the foregoing, it is respectfully submitted that the raised rejection(s) should be withdrawn and this application is now placed in a condition for allowance. Action to that end, in the form of an early Notice of Allowance, is courteously solicited by the Applicant at this time.

The Applicant respectfully requests that any outstanding objection(s) or requirement(s), as to the form of this application, be held in abeyance until allowable subject matter is indicated for this case.

In the event that there are any fee deficiencies or additional fees are payable, please charge the same or credit any overpayment to our Deposit Account (Account No. 04-0213).

Respectfully submitted,



Michael J. Bujold, Reg. No. 32,018

Customer No. 020210

Davis Bujold & Daniels, P.L.L.C.

112 Pleasant Street

Concord, NH 03301-2931

Telephone 603-226-7490

Facsimile 603-226-7499

E-mail: patent@davisandbujold.com